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of the housing, for
instance by storage at high temperature (>50.degree.
C.).

Brief Summary Text - BSTX (2):
For technical reasons, but also to reduce costs, steel, nickel or nickel
plated steel is usually used as base material for metal base-plates and caps.
In order to improve soldering ability of the component electrical leads with
acid-free fluxes, for instance when securing soldered components in circuit
boards, as well as to increase corrosion-resistance of the complete component,
particularly the closure points of base-plate and cap, the complete component
is normally covered partly or completely after closure by means of a layer of
several .mu.m of for instance nickel, tin, copper, cadmium, zinc, lead or
alloys thereof.

Brief Summary Text - BSTX (5):
In all cases where such variations in electrical properties of the
components exceed the admissible limits determined by the application of the
component, at the expense of technical advantages in part, for instance the
problem free and secure welding of base-plates and caps as well as corrosion
resistance of the closures, more expensive production means are used in order
to counter such variations.

Brief Summary Text - BSTX (6):
As an example in the case of power diodes, the base-plate and the cap are
tin-plated before closure of the housing, whereby the welding is very much more
difficult and the hermeticity of the connection can only be ensured with great
difficulty. Alternatively, in oscillator quartzes, only the connecting leads
of the base-plate are coated by dipping in molten tin in an expensive selective
tinning process. In this way, the welding of the base-plate and cap for
example is admittedly facilitated and the solderability of the electrical leads
is ensured, but the closure point itself, the cap and parts of the base-plate
still have a higher susceptibility to corrosion.

Brief Summary Text - BSTX (7):
In transistors and thyristors the base-plates are gold-plated overall to a
thickness of >0.5 .mu.m in order to ensure the solderability of the
connecting leads. As a result of the high cost of gold, production costs for
components sealed in such a manner are far above the production costs of a
housing which has been completely or partially galvanized and which
additionally has the advantage of a greater corrosion resistance thus allowing
the use of cheaper base materials for instance for the cap (steel instead of
nickel) and/or the base-plate (steel instead of NiFe or NiFeCo alloys).

Brief Summary Text - BSTX (9):
The object of the present invention is a corrosion resistant housing of the
aforegoing type to protect electronic and electrical components against
mechanical damage or ambient influences, in which the electrical leads can be
soldered with acid-free fluxes, and in which the built-in components do not
undergo any variations in electrical properties for instance when stored or
operated at high temperature or when proceeding with the test procedures

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United States Patent [19]
Mucke
[11] 4,338,486
[45] Jul. 6, 1982

[54] HOUSING FOR ELECTRICAL AND ELECTRONIC COMPONENTS

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[21] Appl. No.: 44,760
[22] Filed: Jun. 1, 1979
[30] Foreign Application Priority Data
Jun. 3, 1978 [DE] Fed. Rep. of Germany 2824426
[51] Int. Cl.³ H05K 5/06
[52] U.S. Cl. ..... 174/52 H; 228/208; 428/429
[58] Field of Search ..... 174/52 H, 137 A, 153 CM, 174/208, 211; 228/208; 428/429; 357/78

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[57] ABSTRACT

A housing package for the encapsulation of electrical components. The package comprises a base plate and a cap which encapsulate the electrical components. Electrical leads are lead through the base plate. The package is provided with a coating which increases the solderability of the electrical leads and increases the corrosion resistance of the housing.

1 Claim, 7 Drawing Figures